AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the Application.

1-27. (Canceled)

28. (New) The article of manufacture of claim 54, wherein the machine-accessible medium further includes data that cause the machine to perform operations comprising determining a relationship between the diameter, the chirality, and the resonant frequency of the target nanotube.

29. (New) The article of manufacture of claim 52, wherein the machine-accessible medium further includes data that cause the machine to perform operations comprising collecting the target nanotube.

30. (New) The article of manufacture of claim 52, wherein the machine-accessible medium further includes data that cause the machine to perform operations comprising un-bundling the mixture of nanotubes.

31. (New) A method, comprising:

directing a laser beam at a mixture of nanotubes including at least one target nanotube , the laser beam having a frequency less than a resonant frequency of the target nanotube, the resonant frequency determined by a diameter and chirality of the target nanotube;

trapping the target nanotube; and

moving the target nanotube.

32. (New) The method of claim 31, further comprising identifying the resonant frequency of the target nanotube.

33. (New) The method of claim 32, further comprising determining the diameter and chirality of the target nanotube.

34. (New) The method of claim 33, further comprising determining a relationship between the diameter, the chirality, and the resonant frequency of the target nanotube.

35. (New) The method of claim 31, further comprising collecting the target nanotube.

36. (New) The method of claim 31, further comprising un-bundling the mixture of nanotubes.

37. (New) The method of claim 31, wherein the target nanotube contains a metallic single-walled carbon nanotube.

38. (New) The method of claim 31, wherein the target nanotube contains a semiconductor single-walled carbon nanotube.

39. (New) The method of claim 31, wherein, the mixture of nanotubes includes another target nanotube, the method further comprising:

directing a laser beam having another laser frequency at the mixture of nanotubes, the another laser frequency being less than a next resonant frequency of the next target nanotube, the other resonant frequency determined by a diameter and chirality of the other target nanotube;

trapping the other target nanotube;

and moving the other target nanotube.

40. (New) The method of claim 31, further comprising:

directing another laser beam having a laser frequency less than the resonant frequency of the target nanotube at the mixture of nanotubes; and

trapping the target nanotube;

and moving the target nanotube.

41. (New) The method of claim 31, wherein the target nanotube is moved into a fluid layer containing water.

42. (New) An apparatus, comprising:

a laser to emit a laser beam having a frequency lower than a resonant frequency corresponding to a target nanotube, the resonant frequency determined by a diameter and chirality of the target nanotube; and

the laser beam configured to induce at least one optical dipole trap in the target nanotube and to move the target nanotube from a first fluid layer to a second fluid layer.

43. (New) The apparatus of claim 42, wherein the first and second fluid layers comprise water.

44. (New) The apparatus of claim 42, wherein the target nanotube contains a metallic single-walled carbon nanotube.

45. (New) The apparatus of claim 42, wherein the target nanotube contains a semiconductor single-walled carbon nanotube.

46. (New) The apparatus of claim 42, further comprising a third fluid layer, the third fluid layer being in proximity with the second fluid layer.

47. (New) The apparatus of claim 46, wherein the laser beam is coupled to emit a next frequency lower than a resonant frequency corresponding to a next target nanotube in the mixture of nanotubes, the next resonant frequency determined by a diameter and chirality of the next target nanotube, the laser beam being configured to trap the next target nanotube and to move the next target nanotube into the third fluid layer.

48. (New) The apparatus of claim 42, further comprising a first collector to collect the target nanotube.

49. (New) A system, comprising:
an apparatus configured to direct a laser beam at a mixture of nanotubes including at least one target nanotube, the laser beam having a laser frequency less than a resonant frequency of the target nanotube, the resonant frequency determined by a diameter and chirality of the target nanotube, the laser beam configured to move the target nanotube, the apparatus configured to collect the target nanotube; and

a piezoelectric tube coupled to the collected target nanotube.

50. (New) The system of claim 49, further comprising a current amplifier coupled to the collected target nanotube.

51. (New) The system of claim 50, further comprising a display coupled to the current amplifier.

52. (New) An article of manufacture, comprising:

a machine-accessible medium including data that, when accessed by a machine, cause the machine to perform the operations comprising:

directing a laser beam at a mixture of nanotubes including at least one target nanotube, the laser beam having a frequency less than a resonant frequency of the

target nanotube, the resonant frequency determined by a diameter and chirality of the target nanotube;

trapping at least one target nanotube; and

moving the target nanotube.

53. (New) The article of manufacture of claim 52, wherein the machine-accessible medium further includes data that cause the machine to perform operations comprising identifying the resonant frequency of the target nanotube.

54. (New) The article of manufacture of claim 53, wherein the machine-accessible medium further includes data that cause the machine to perform operations comprising identifying the diameter and the chirality corresponding to the resonant frequency of the target nanotube.